

123-1-709
Translation from: Referativnyy Zhurnal, Mashinostroyeniye, 1957,
Nr 1, p. 108 (USSR)

AUTHOR: Fertman, V. S.

TITLE: Tentative Introduction of End Mills of Advanced Design
(Opyt vnedreniya kontsevykh frez progressivnoy konstruktsii)

PERIODICAL: Sbornik ratsional'n. predlozheniy, Ministerstva Elektro-
tekhnicheskoy Promyshlennosti SSSR, 1956; Nr 1 (59)
pp. 14-16

ABSTRACT: It is noted that the end mills design listed under ГОСТ
3958-47 and ГОСТ 3959-47 have several shortcomings
which have been eliminated in the new end mills. The new
end mills work smoother due to the wide-tooth angle
(40° instead of 20°); the removal of chips has also been
improved. Such mills permit additional milling to a
diameter smaller by 10 to 15%. The design of the cutting
lip of the new mills is presented.

Card 1/1

L.A.D.

TUBAI, Arthur; (Budapest); HIMFER, Frigyes; (Budapest); BARDI, Kornel
(Budapest); FERTSE, Istvan (Budapest)

Forum of innovators. Ujit lap 16 no.18:30 25 S '64

KOZINETS, G.I.; FERTUKOVA, N.M.; SHITKOVA, M.G.

Radioautography of the blood and hemopoietic organs. Probl.
gemat.i perel.krovi no.7:9-13 '61. (MIRA 14:9)

1. Iz tsentral'nogo ordena Lenina instituta gematologii i pereli-
vaniya krovi (dir. - deystvitel'nyy chlen AMN SSSR prof. A.A.
Bagdasarov) Ministerstva zdravookhraneniya SSSR.
(HEMATOPOIETIC SYSTEM—RADIOGRAPHY) (AUTORADIOGRAPHY)

RESHCHIKOV, V.P.; KHOKHLOVA, M.P.; FERTUKOVA, N.M.

Influence of homologous bone marrow transplantation on the course of leukemic processes in mice with transplanted leukosis. Probl. gemat.i perel.krovi no.9:17-21 '61. (MIRA 14:9)

1. Iz Tsentral'nogo ordena Lenina instituta gematologii i pereli-vaniya krovi (dir. - deystvitel'nyy chlen AMN SSSR prof. A.A. Bagdasarov [deceased]) Ministerstva zdroyookhraneniya SSSR.
(MARROW---TRANSPLANTATION) (LEUKEMIA)

ZARETSKIY, I.I.; FERTUKOVA, N.M.; RASHCHIKOV, V.P.; KHOKHLOVA, M.P.

Change in hemopoiesis in health animals following bone marrow
transplantation. Probl. gemat i perel. krovi 6 no. 2:21-26 '61.
(MIRA 14:2)
(MARROW—TRANSPLANTATION) (HEMOPOIETIC SYSTEM)

ZARETSKIY, I.I.; RESHCHIKOV, V.P.; KHOKHLOVA, M.P.; FERTUKOVA, N.M. (Moskva)

Dynamics of the restoration of hematopoiesis in irradiated mice following bone marrow transplantation. Pat.fiziol.i eksp.terap. 6 no.2:26-31 Mr-Apr '62. (MIRA 15:8)

1. Iz Tsentral'nogo ordena Lenina instituta gematologii i perelivaniya krovi (dir. - dyestvitel'nyy chlen AMN SSSR prof. A.A.Bagdasarov). (RADIATION SICKNESS) (BONE MARROW—TRANSPLANTATION) (HEMOPOIETIC SYSTEM)

FERTUKOVA, N.M.

Change in hemopoiesis in healthy animals under the effect of bone marrow extracts. Pat. fiziol. i eksp. terap. 9 no.2:50-54 Mr-Apr '65. (MIRA 18:5)

1. Laboratoriya eksperimental'noy terapii bolezney sistemy krovi (zav. - prof. I.I. Zaretskiy) Tsentral'nogo ordena Lenina instituta gematologii i perelivaniya krovi (dir. - dotsent A.Ye. Kiselev), Moskva.

GAYDAYEV, P.A.; FERTYAKOV, G.V.

Using approximations in adjusting 2d class triangulation nets.
Geod.i kart. no.1:7-15 Ja '63. (MIRA' 16:2)
(Triangulation)

LITEANU, E.; FERU, M.

New contributions to the study on the stratigraphy of the lignite
deposit in the Jiu-Motru interfluve. Studii cerc geol 9 no.1:81-92
'64

1. Institute of Geology and Geography of the Rumanian Academy.

FERUANACOVA, Z.

Food for turtledoves (Streptopelia decaocto decaocto
Friv, and Streptopelia turtur turtur Linn) p. 436

BIOLOGRIA. (Slovenska akademia vied) Bratislava CZECHOSLOVAKIA

Vol. 10, No. 4. 1955.

SOURCE: East European Accession List (EEAL)
Library of Congress. Vol. 5, No. 1
January, 1956.

-107-57-1-41/60

AUTHOR: Feruk, V.

TITLE: Making an Instrument Pointer. Experience Exchange (Izgotovleniye samodel'noy strelki. Obmen opytom)

PERIODICAL: Radio, 1957, Nr 1, p 37 (USSR)

ABSTRACT: A method is suggested for making a measuring-instrument pointer from aluminum foil by rolling foil around a straight section of wire and then withdrawing the wire from the foil tubing.

AVAILABLE: Library of Congress

Card 1/1

VASIL'YEV, L. (g. Tyumen'); CHICHKO (g. Kiyev); STARODUB, D. (g. Kiyev);
 KALUZHSKIY, G. (g. L'vov); SMIRNOV, V.; REBENIN, A.; URLOV, I.;
 FERUK, V. (Kuybyshev); BYCHININ, I. (Kuybyshev); HASHKO, V.;
 SHEVKUN, Yu. (Khar'kov); ISTYUFYEV, V. (Leningrad); GATSANYUK, P.
 (Chernigovskaya obl.); SKURKO, L.; BABYUK, M.; GUBANOV, L.
 (Krasnodar); TISHCHENKO, D. (st. V. Sadovaya); YEFIMOV, M.S.
 (Leningrad); FEDOROV, V.; SUKHOV, A.; TIMOSHENKO, I. (Omskaya
 oblast'); KRIVTSUN, B. (Khar'kov); BARANTSEV, N. (Fedosiya).

Exchange of experience. Radio no.1:31,32,35,39,40. Ja '59..
 (MIRA 12:3)

(Radio)

LAGUNOV, V.; SHUREMOV, A.; TROFIMOV, M.; KOSTYKOV, I., slesar';
FERULEV, A.

In organizations of our society. Izobr.i rats. no.10:
16-17 0 '59. (MIRA 13:2)

1. Predsedatel' Yakutskogo oblastnogo soveta Vsesoyuznogo obshchestva izobretateley i ratsionalizatorov (for Lagunov).
 2. Starshiy inzhener byuro tekhnicheskoy informatsii i izobretatel'stva, L'vov (for Shuremov).
 3. Predsedatel' soveta Vsesoyuznogo obshchestva izobretateley i ratsionalizatorov Vel'giyskoy bumazhnoy fabriki, g.Borovichi (for Trofimov).
 4. Zavod "Soyuz," predsedatel' soveta Vsesoyuznogo obshchestva izobretateley i ratsionalizatorov, Leningrad (for Kostykov).
 5. Predsedatel' zavodskoy organizatsii Vsesoyuznogo obshchestva izobretateley i ratsionalizatorov Lys'venskogo metallurgicheskogo zavoda, g.Lys'va, Permskoy oblasti (for Ferulev).
- (Efficiency, Industrial)

FERULIK, Alois

Nase lesy. (Our Forests) Boskovice, Okresni vlastivedne museum a vlastivedny krouzek, 1957. 7 p.

Bibliograficky katalog, CSR, Ceske knihy, No. 36. 15 Oct 57. p. 784.

FERUSIC, Greta

Torsion of beams on elastic foundations. Publ Teh fak
Sarajevo 2 no.2:29-31 '59.

FERUSIC, S.

Experiences in the application of radio-istopes in our industry. I. Defectos-
copy. (To be contd.) p. 1293.

(TEHNIKA. Vol. 12, No. 8, 1957, Beograd, Yugoslavia)

SO: Monthly List of East European Accessions (EEAL) Lc. Vol. 6, No. 10, October 1957. Uncl.

FERUSIC, S.

Experiences in the application of radio-isotopes in our industry. III. Defectoscope.

p. 1632 (Tehnika) Vol. 12, no. 10, 1957, Belgrade, Yugoslavia

SO: MONTHLY INDEX OF EAST EUROPEAN ACCESSIONS (EEAI) LC, VOL. 7, NO. 1, JAN. 1958

RADOJKOVIC, Milan, ing., prof. (Beograd); MISKOVIC, St., ing. (Beograd);
HRIBAR, J., ing., prof. (Zagreb); HRUSKA-BOZICEK, Bozena, ing. (Zagreb);
SAUPAL, L., ing. (Maribor); PERUSIC, Seid, ing. (Sarajevo)

Welding and related techniques in maintenance and repair. Zavarivac 4
no. 4:13-22 '59

1. Glavni i odgovorni urednik, "Zavarivac" (for Radojkovic.)
2. Clan Urednistva, "Zavarivac" (for Perusic.)

VLAJKOVIC, M., ing.; FERUSIC, Seid, ing. (Sarajevo)

Modern dosimetric devices for radioactive radiation. Zavarivac 4
no. 4:24-29 '59.

1. Clan Urednistva, "Zavarivac" (for Ferusic)

FERUSIC, Seid, inz. (Sarajevo)

Welding of bifurcated parts for reactive and similar motors.
Zavarivac 5 no.4:14 '60

1. Clan Urednistva, "Zavarivac".

FERUSIC, Seid, ing.

Results of the radiographic control of the cogwheel for Harding mills and flotation. Tehnika Jug 17 no.3:440 '62.

1. Sef laboratorije za defektoskopiju, "Energoinvest", Sarajevo;
Clan Redakcionog odbora, "Radioaktivni izotopi i zracenja."

Y/001/62/000/006/001/001
D409/D301

AUTHOR: Ferušić, Seid, Engineer, Docent (Sarajevo)

TITLE: Gamma radiography

PERIODICAL: Tehnika, no. 6, 1962, 1044-1048

TEXT: The article deals briefly with the principles and advantages of industrial gamma radiography and with its increasing application by Yugoslav industry. With the help of the Savezna komisija za nuklearnu energiju (Federal Commission for Nuclear Energy), five industrial gamma defectoscopy centers have been founded in Yugoslavia and about 30 enterprises use radiographic quality control methods, including gamma defectoscopy. The latest Yugoslav "JU-DE 5" defectoscope for iridium-192 and caesium-137 radioisotopes weighs about 10 kg and has an activity of up to 1,500 m-curie. The quality of welds and application of radiographic testing methods to structures exposed to high pressures and temperatures is governed by a law issued in 1957 and 1959, while the technical-

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Gamma radiography

Y/001/62/000/006/001/001
D409/D301

ities of non-destructive testing of materials and welds are covered by Yugoslav standard specifications. Considerable research is being carried out by the Laboratory of Welding and Defectoscopy of the "Energoinvest" Istraživačko-razvojni centar (Research and Development Center) on the greater application of densitometric measurements in flaw-detecting radiographs. The article will be continued. There are 2 tables, 8 figures and 5 references: 4 Soviet-bloc and 1 non-Soviet-bloc.

ASSOCIATION: Gradjevinski fakultet (Construction Division),
Sarajevo

SUBMITTED: November 15, 1961

Card 2/2

FERUSIC, Seid, inz.

Computation and construction of the equipment for industrial gamma defectoscopy. Zavarivanje 5 no.6:144-153 Ag '62.

1. Sef Laboratorija za navarivanje i defektoskopiju "Energoinvest".

FERUZ, A.S.

Shoulder dislocation in syringomyelia. Ortop.travm. i protes. 20
no.1:74-75 Ja '59. (MIRA 12:3)

1. Iz travmatologicheskogo otdeleniya (zav. - zasluzhennyy vrach USSR
S.I. Likhoded) Melitopol'skoy gorbol'nitsy (glavnyy vrach - N.I. Cher-
nykh) i nauchno-opornogo punkta Ukrainskogo nauchno-issledovatel'skogo
instituta ortopedii i travmatologii imeni M.I. Sitenko (dir. - chlen-
korrespondent AMN SSSR prof. N.P. Novachenko).

(SHOULDER, disloc.

in syringomyelia (Rus))

(SYRINGOMYELIA, compl.

shoulder disloc. (Rus))

LIKHODED, S.I., zasluzhennyy vrach UkrSSR, kand. med. nauk (Melitopol',
prosp. Bogdana Khmel'nitskogo, d.46a, kv. 20); FERUZ, A.S.

Retroperitoneal interstitial hemorrhage in pelvic bone
fractures and complex central hip dislocations. Ortop.,
travm. i protez. 24 no.8:19-22 Ag '63. (MIRA 17:1)

1. Iz nauchno-opornogo punkta Ukrainskogo instituta ortopedii
i travmatologii imeni M.I. Sitenko (dir. - chlen-korrespondent
AMN SSSR prof. N.P. Novachenko) i Melitopol'skoy gorodskoy
bol'nitsy, Melitopol'skoy.

(CP)

The determination of nitrogen in iron metals and iron alloys. F. A. Per'yanchich, *Zavodskaya Lab.* 1932, No. 1, 34-41; *Chem. Zhiln.* 1934, I, 2080.—A detailed discussion of some of the methods used technically for detem. on acid-sol. and acid-resistant metals and alloys of the Fe group. W. A. Moore

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ASAC-SLA METALLURGICAL LITERATURE CLASSIFICATION

101 AND 102 INDEX

PROCESSES AND PROPERTIES INDEX

103 AND 104 INDEX

105

Colorimetric determination of tungsten. F. A. Fawcett, *Anal. Chem.* 1934, 6, 301-303. 0.1 g. of sample (containing 0.1% WO₃) is ignited, treated with 10% NaOH solution, the solution is fused with 0.5 g. of Na₂CO₃, the solution is allowed, and the residue is washed with water. The residue is dissolved in 5 c.c. of 10% NaOH solution. H₂O to 5 c.c., 4 c.c. of conc. HCl, and a few drops of 0.1% TlCl₃ in 50% HCl are added, and H₂O to 10 c.c. The coloration obtained is compared with that given by standard aq. Na₂WO₄. R. T.

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ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

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1ST AND 2ND OFFICE		PROCESSING AND PROPERTY INDEX		TOP AND 4TH CROSS	
BC		<p>Analysis of cerium oxide. J. A. PERANTICH- ing, Russ. Pat. 1934, 2, 561-563. The powdered ore containing 2-0.25 g. of Ce_2O_3 is ignited to complete oxidation of cerium, boiled with 20 c.c. of conc. nitric acid, 5 c.c. of conc. HNO_3 are added, and the mixture is evaporated to complete oxidation of cerium. The residue is filtered and filtered. The residue is washed with H_2O and aq. NH_3 dried, and then with 1:1 H_2O and H_2SO_4 mixture, the aq. extract of the last is boiled with AcOH, and the ppt. of FeCl_3 is washed with KOH at $250-300^\circ\text{C}$. The aq. extract of the last is made strongly acid and Ce is added, when Ce is completely oxidized after 30 min. Excess of HCl is then added, the solution boiled to destruction of Ce and excess Ce, 10 c.c. of 0.1N KI and 1 g. of NaHCO_3 are added to the solution, filtered immediately by means of 0.1N KI, and the I liberated according to the following equation is titrated with 0.1N $\text{Na}_2\text{S}_2\text{O}_3$: $\text{CeO}_2 + \text{H}_2\text{O} + 4\text{H}^+ \rightarrow \text{Ce}^{4+} + 2\text{H}_2\text{O}$ $\text{Ce}^{4+} + 2\text{I}^- + 4\text{H}^+ \rightarrow \text{Ce}^{3+} + 2\text{I}_2 + 4\text{H}^+$ $\text{I}_2 + 2\text{S}_2\text{O}_3^{2-} \rightarrow 2\text{I}^- + \text{S}_4\text{O}_6^{2-}$ The above method is 0.1% accurate. R. I.</p>		B-I-24	
A.S.T.M. METALLURGICAL LITERATURE CLASSIFICATION					
1ST AND 2ND OFFICE		PROCESSING AND PROPERTY INDEX		TOP AND 4TH CROSS	
1ST AND 2ND OFFICE		PROCESSING AND PROPERTY INDEX		TOP AND 4TH CROSS	

1ST AND 2ND COLUMNS										3RD AND 4TH COLUMNS									
PROCESSES AND PROPERTIES INDEX																			
<p>WA</p> <p>A sample set for hot filtration of aqueous solutions. F. A. Zverevskiy, Zvezdnyye Zash. 6, 112(1965). A short-neck funnel suspended in a beaker containing about 1 cm. of H₂O is kept hot during the filtration by holding the weight in the beaker. Chas. Blum</p>																			
<p>COMMON ELEMENTS</p> <p>COMMON VARIANTS</p>																			
<p>ASB-3LA METALLURGICAL LITERATURE CLASSIFICATION</p>																			
1ST AND 2ND COLUMNS										3RD AND 4TH COLUMNS									
1ST AND 2ND COLUMNS										3RD AND 4TH COLUMNS									

BC

d-1

Colorimetric determination of tungsten and molybdenum. F. A. FRUJANTSCHICH (Zavod. Lab., 1937, 6, 288-293).—In absence of Mo or Sb, colorimetric determination of W may be effected using TiCl_3 in place of SnCl_2 (0.2 ml. 15% TiCl_3 equiv. to 2.5 g. of $\text{SnCl}_2 \cdot 2\text{H}_2\text{O}$). As does not interfere. TiCl_3 may similarly be used in place of SnCl_2 in the colorimetric determination of Mo in absence of W. R. T.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

ESOM SYMBOL	ESOM SYMBOL
10000 01	10000 01
10000 02	10000 02
10000 03	10000 03
10000 04	10000 04
10000 05	10000 05
10000 06	10000 06
10000 07	10000 07
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10000 09	10000 09
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1ST AND 2ND COLUMNS										3RD AND 4TH COLUMNS									
PROCESSING AND PROPERTIES INDEX																			
<p><i>BC</i> <i>a-1</i></p> <p>Standard coloured solutions for colorimetric determination of tungsten and molybdenum. F. A. FRYLANDER and D. N. JORDANSKI (Zavol. Lab., 1958, 7, 565-567). The coloration obtained in the determination of W by the Feigl-Kriszok method (A. 1952, 124) is initiated by a solution of $(\text{Co}(\text{NH}_4)_2\text{H}_2\text{O})_2(\text{I})$ in dil. aq. NH_3. Those obtained in King's method for Mo are initiated by mixing (I), Mo-orange, and dil. aq. NH_3 in various proportions. The standards are unsuitable for use with a Duboscq colorimeter.</p> <p style="text-align: right;">R. T.</p>																			
<p>ABR-51A METALLURGICAL LITERATURE CLASSIFICATION</p>																			
FROM STUDY										FROM STUDY									
SECTION 1										SECTION 2									
SECTION 1										SECTION 2									

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107 AND 108 SHEETS

PROCEEDINGS AND PROPERTIES INDEX

B-I-4

Drop method of detection of tungsten in ores.
 V. A. FOMIN and M. G. USTYVANSKY
 (Zavod. Lab., 1955, 1424-1425).—5 mg. of
 material was fused with 20 mg. of NaOH, and the melt
 is fused with 5 mg. of Na_2O_2 . The melt is dissolved
 in HCl, the solution filtered, and the residue washed
 with hot 4N HCl and dissolved in aq. NH_3 . KONS,
 conc. HCl, and conc. HNO_3 are added to the solution,
 when a yellow coloration indicates W. R. T.

ASS. S.L.A. METALLURGICAL LITERATURE CLASSIFICATION

EDSIS SYNOBISIV

100000 WIT ONV 841

QUALITATIVE

EDSIS SYNOBISIV

100000 WIT ONV 841

1ST AND 2ND COLUMNS		PROCESSIES AND PROPERTIES INDEX		3RD AND 4TH COLUMNS	
COMMON ELEMENTS	COMMON VARIABLES INDEX	<p>Determination of small quantities of mercury in minerals. E. A. Kervanchich and M. A. Polikarpova. <i>Zhurnal Fiz. Khim.</i> 1945. — The method proposed is based on those of C. Mahr (<i>C.A.</i> 30, 3740) and of A. A. Saukov and N. K. Aldin'yan (<i>C.A.</i> 35, 5088). Mix a 0.5-3.0-g. sample contg. from 0.03 to 1.0 mg. of Hg and ground to 200 mesh with 50% of reduced Fe and 10-25% of Cu powder. Place in the sealed end of a glass tube (diam. 12 mm., length 250 mm.) 1-2 g. of ankerite (magnesite, dolomite) ground to 40-100 mesh, a layer of quartz (length 1-2 cm.) ground to 40 mesh, of the sample with Fe and Cu and a layer of ignited ZnO (length 1-2 cm.). Tapping lightly, make a horizontal canal over the whole length of the mixt. Pack the narrowed neck of the glass tube with Cu gauze (180-325 mesh) slightly oxidized in the air and reduced at 600-700° in a current of H₂. With the tube in a horizontal position, place asbestos screens (one at the quartz layer and the other at the open end) and heat the mixt. first near the layer of ZnO, then gradually over the whole area until at a dull red heat. Remove the screen and heat the whole mixt. (except the ZnO layer) to a slight redness. The CO₂ evolved from the carbonate forces the residual Hg vapors towards the Cu gauze (the moisture condenses before reaching the gauze), where it condenses. Cool the tube, remove the Cu gauze, and cut the glass tube in two. Rinse with 20 ml. of hot HNO₃ (1:10) the portion of the tube that had contained the Cu gauze, and dissolve the gauze in it. To the hot HNO₃ soln., add 5 ml. of conc. freshly prep. soln. of NH₄Cr(CNS)₃·(NH₃)₂ (dissolve 1 g. of the salt in 40 ml. of warm water and filter), let the mixt. stand in a warm place until the ppt., Hg[Cr(CNS)₃·(NH₃)₂], coagulates (10-20 min.). Filter through a dense filter, wash carefully with HCl (1:100) and, finally, with hot water, dry the washed ppt. in a porcelain crucible, ash at a low temp., fuse the residue in the crucible with 0.05-0.1 g. of Na₂O₂ for 2-3 min. without bringing the melt to redness, cool, add 0.5-1.0 ml. of water, evap. to near dryness, dissolve the residue in 2-3 ml. of water, add conc. HCl dropwise until neutralized, add an excess of 1-2 drops of HCl and 0.02-0.05 g. of KI and titrate after 1-3 min. from a microburet with 0.01 N freshly prep. S₂O₈²⁻, adding starch toward the end of the titration. One ml. of 0.01 N Na₂S₂O₈ = 0.3344 mg. of Hg. Inaccurate results are obtained if the content of Hg is less than 0.02-0.03 mg. Six references.</p>		<p>W. R. Henn</p>	
		<p>ASS-31A METALLURGICAL LITERATURE CLASSIFICATION</p>		<p>3RD AND 4TH COLUMNS</p>	

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Calorimetric Determination of Tungsten in Ore in the Presence of Arsenic, Antimony, Molybdenum, Titanium, and Phosphorus. (In Russian.) F. A. Farjan-chich. Factory Laboratory (U.S.S.R.), v. 13, June 1947, p. 648-678.

Proposes a new reaction based on the reduction of the complex of tungstic and thiocyanic acids by trivalent titanium. Test results indicate applicability to 0.023-1.5% W, in ore containing up to 10% As; up to 2.6% Sb; up to 0.5-3% Mo; up to 0.3% Cr; and up to 0.1% V, Sn, or Te. The presence of traces of F, Ti, P, Pb, Ta, Cu, and precious metals (except rhenium) does not interfere. 11 ref.

ASB-55A METALLURGICAL LITERATURE CLASSIFICATION

FROM 004100

001000 GAT 000 100

Electrolytic purification of mercury for the dropping electrode. P. A. Fer'yanchich. *Trudy Komissii Anal. Khim., Otdel. Khim. Nauk, Akad. Nauk S.S.S.R.* 2, (5), 87-9 (1949).—The app. comprises a watch glass resting on 3 glass supports inside a glass rectangular vessel. The Hg to be purified is filtered through paper, passed through H^+ , HNO_3 , and then placed in the watch glass to which is brought a Pt lead from the + terminal of 1-2 v. source of d.c. The rectangular glass vessel is filled with 1:20 HNO_3 and through it is brought a Pt lead from the - terminal. This wire runs along the outside bottom of the watch glass. The purified Hg collects at the bottom of the watch glass while $Hg(NO_3)_2$ collects on top and spills over the edge. The purified Hg is siphoned off with a pipet and fresh Hg is added as needed. M. Hosh

SOV/137-58-9-20248

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 9, p 304 (USSR)

AUTHOR: Fer'yanchich, F.A.

TITLE: Chemical Microanalysis of Tantalo-niobates (Khimicheskiy mikroanaliz tantalo-niobatov)

PERIODICAL: Tr. N.-i. gorno-razved. in-ta "Nigrizoloto", 1957, Nr 23, pp 125-138

ABSTRACT: The following constituents are determined in the full micro-chemical analysis of tantalo-niobates: SiO_2 , TiO_2 , Nb_2O_5 , Ta_2O_5 , CaO , MgO , MnO , Al_2O_3 , Fe_2O_3 , FeO , ThO_2 , Ce_2O_3 , U^{4+} , UO_2 , CuO , PbO , rare earths, Bi_2O_3 , H_2O , ZrO_2 , (+ HfO_2), SnO_2 , and the losses on roasting (LOR). The analysis is performed on 3-4 test samples. In the first sample most of the components are determined; in the second, the LOR and the MnO ; in the third and the fourth the FeO . The first two weighed samples of the material are fused with $\text{K}_2\text{S}_2\text{O}_7$, the last two are decomposed with HF and H_2SO_4 . At high SiO_2 contents the weighed sample is fused with Na_2CO_3 , and the course of

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SOV/137-58-9-20248

Chemical Microanalysis of Tantalo-niobates

analysis is similar to that of the usual analysis of silicates. SiO_2 , Nb_2O_5 , and Ta_2O_5 are separated by dissolving the pyrosulfate melt in a solution of pyrogallol. Pyrogallol, $\text{H}_2\text{C}_2\text{O}_4$, cupferron, phenylarsonic acid, oxine, and KIO_3 are used in the microanalysis for the precipitation and separation of the (NH_4) S-group metals. Maximum attention should be given to the quality of the reagents. A control test is conducted for each series of similar determinations, especially for the determination of Si, Al, Ca, Na, Fe, H_2O , CO_2 , S, and As. The precision of the microanalysis is characterized by the mean difference between two parallel determinations which should not exceed 1.00 abs.% when the contents of the component is 100-30% and 0.50 abs.% at 30-10%. Drawings of the King apparatus, of a simple air bath, and of the hydrogen-sulfide apparatus are given.

1. Minerals--Determination
2. Niobium-tantalum compounds--Microanalysis^{Kh.Sh.}
3. Niobium-tantalum compounds--Chemical analysis

Card 2/2

GODOVIKOV, A.A.; FER'YANCHICH, F.A.

Discovery in the U.S.S.R. of laitakariite, a rare bismuth selenide,
Geol. i geofiz. 10:19-26 '60. (MIRA 14:2)

1. Institut geologii i geofiziki Sibirskogo otdeleniya AN SSSR,
Novosibirsk.

(Bismuth selenide)

GODOVIKOV, A.A.; FER'YANCHICH, F.A.

Bismuth selenide "laitakariite". Trudy Inst.geol.i geofiz.Sib.otd.
AN SSSR no.15:7-30 '63. (MIRA 17:4)

FERYDLIN, L.Kh.; SHARF, V.Z.; ABIDOV, M.A.; GLUKHOVSTEV, V.G.

Dehydration of methylcyclopropylcarbinol in the presence of acid
catalysts. Izv. AN SSSR. Otd. khim. nauk no. 10:1843-1849 0 '62.

(MIRA 15:10)

1. Institut organicheskoy khimii im. N.D. Zelinskogo AN SSSR.
(Methanol) (Dehydration (Chemistry)) (Catalysts)

FER'YEVA, V. (Petropavlovsk-Kamchatskiy)

Demands of working people are growing. Grazhd.av. 18 no.7:
12 JI '61. (MIRA 14:8)
(Petropavlovsk-Kamchatskiy--Airports--Management)

FERYSZKA, Rubin, mgr inz.

Testing the climatic resistance of telephone and radio-engineering
elements and installations. Prace Inst teletechn 3 no.2:159-162 '59.

PERYSZKA, Rubin, mgr inż.

Influence of the technological parameters upon the resistance of
forms pressed from thermohardenable molding compounds. Prace
Inst teletechn 3 no.3:3-22 "59.

1. Instytut Tele- i Radiotechniczny, Warszawa.

FESAY, M.V.

FESAY, M.K. (Kiev)

Treatment of cows with DDT in control of gadflies. Vop. pit. 13
no. 4:52-53 JI-Ag '54. (MLRA 7:7)

(DDT,

*control of gadflies, treatment of cows)

(FLIES,

*gadflies, control with DDT, treatment of cows)

PERNOV, K.; ILCHOVSKI, St.; STOEVA, Z.; DASKALOVA, L.;
FESCHIEVA, N.; PETROV, Ig.; TANEVA, Iv.; BOIADZHIEVA, Iv.;
MISHKOVA, R.

On clinical forms of multiple sclerosis. Suvr. med. 12 no.11:
93-99 '61.

1. Iz Katedrata po nervni bolesti pri VMI [Vissh meditsinski
institut] - Sofia (Rukov. na katedrata prof. S. Bozhinov).
(MULTIPLE SCLEROSIS)

KIRSANOV, A.V.; FESHCHENKO, N.G.

Azo dyes based on dimethyl esters of aminophenylsulfonylamidophosphoric acids. Zhur.ob.khim. 30 no.10:3389-3392 0 '61. (MIRA 14:4)

1. Institut organicheskoy khimii Akademii nauk Ukrainskoy SSR.
(Phosphoramidic acid) (Azo dyes)

FESHCHENKO, N.G.; KIRSANOV, A.V.

Phenyl - and diphenylphosphorus iodides. Zhur. ob. khim. 31
no.4:1399-1400 Ap '61. (MIRA 14:4)

1. Institut organicheskoy khimii Akademii nauk Ukrainskoy SSR.
(Phosphorus compounds)

24.4100

26754

S/021/60/000/011/002/009

D204/D302

AUTHORS: Savin, H.M., Academician UkrSSR, and Feshchenko, S.F.

TITLE: On the dynamic forces in an elastic-viscous thread of variable length

PERIODICAL: Akademiya nauk Ukrayins'koyi RSR. Dopovid, no. 11, 1960, 1469 - 1475

TEXT: The present article proposes an asymptotic method of solution for an ascent of three stages 1) uniformly accelerated motion 2) uniform motion 3) uniformly retarded motion. A system of linear differential equations of the form

$$A(\tau, s) \frac{d^2 q}{d\tau^2} + C(\tau, s) \frac{dq}{d\tau} + B(\tau, s) q = P(\tau, s) \quad (1)$$

is considered, with the initial conditions $(q)_{t=0} = q_0$, $(\frac{dq}{dt})_{t=0} = \dot{q}_0$ [Abstractor's note: \dot{q}_0 is incorrectly written as q_0] where

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On the dynamic forces in an ...

q and $P(\tau, \varepsilon)$ are n -dimensional vectors, and $A(\tau, \varepsilon)$, $C(\tau, \varepsilon)$ and $B(\tau, \varepsilon)$ are square matrices of the n -th order of the form

$$A(\tau, \varepsilon) = \sum_{s=0}^{\infty} \varepsilon^s A_s(\tau), \quad C(\tau, \varepsilon) = \sum_{s=0}^{\infty} \varepsilon^s C_s(\tau), \quad B(\tau, \varepsilon) = \sum_{s=0}^{\infty} \varepsilon^s B_s(\tau), \quad (2)$$

where $\tau = \varepsilon t$, and ε is a small positive parameter. It is assumed that the matrices $A_s(\tau)$, $C_s(\tau)$, $B_s(\tau)$ and the vectors $P_s(\tau)$ ($s = 0, 1, 2, \dots$) have derivatives of all orders with respect to τ , on the segment $0 \leq \tau \leq L$. The matrices $A_0(\tau)$ and $B_0(\tau)$ are symmetric. A system of linear equations is considered, where λ_ν is the ν -th root of the equation

$$\text{Det}/B_0(\tau) - A_0(\tau)/ = 0 \quad (4)$$

(assuming the λ_ν all different). The corresponding functions $\mu_{\nu j}(\tau)$ ($\nu, j = 1, 2, \dots, n$) are assumed to satisfy

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D204/D302

$$(A_0(\tau) u_1(\tau), u_k(\tau)) = \delta_{ik} \begin{cases} 1 & i = k \\ 0 & i \neq k \end{cases}, \quad (i, k = 1, 2, \dots, n). \quad (5)$$

It follows that the functions $\lambda_{ij}(\tau)$, $\mu_{ij}(\tau)$ also possess derivatives of all orders with respect to τ , on the segment $0 \leq \tau \leq L$.

Theorem 1: If the matrices $A_s(\tau)$, $C_s(\tau)$, $B_s(\tau)$ and the vectors $P_s(\tau)$, ($s = 0, 1, \dots$) have derivatives of all orders with respect to the segment $0 \leq \tau \leq L$ and $A_0(\tau)$ and $B_0(\tau)$ are symmetric then the asymptotic partial solution of (1) may be written

$$q = [\mu_1(\tau) + \varepsilon \Pi(\tau, \varepsilon)] \zeta + H(\tau, \varepsilon) \quad (6)$$

where ζ is a scalar function which is determined from

$$\frac{d\zeta}{d\tau} = [D(\tau, \varepsilon) + i\Omega(\tau, \varepsilon)] \zeta, \quad (7)$$

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where

$$\begin{aligned} D(\tau, \varepsilon) &= \sum_{i=1}^{\infty} \varepsilon^i D_i(\tau), \quad \Omega(\tau, \varepsilon) = \sum_{i=0}^{\infty} \varepsilon^i \Omega_i(\tau), \\ \Pi(\tau, \varepsilon) &= \sum_{i=0}^{\infty} \varepsilon^i \Pi_i(\tau), \quad H(\tau, \varepsilon) = \sum_{i=0}^{\infty} \varepsilon^i H_i(\tau) \end{aligned} \quad (8)$$

[Abstractor's note: "of the vector $P_g(\tau)$ " is incorrectly written for "the vectors $P_g(\tau)$ " in the text]. Theorem 2: If $A_g(\tau)$, $B_g(\tau)$, $C_g(\tau)$ and the vectors $P_g(\tau)$ satisfy the conditions of Theorem 1, then for arbitrary $L > 0$ there can be found some ε_0 ($0 < \varepsilon \leq \varepsilon_0$) and a constant C_m^* independent of ε so that the inequalities

$$\|q - q_m\| \leq C_m^* \varepsilon^m, \quad \|\dot{q} - \dot{q}_m\| \leq C_m^* \varepsilon^m \quad (12)$$

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On the dynamic forces in an ...

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hold. [Abstractor's note: The repetition of the inequality (12) seems almost certain to be a misprint]. Similarly solutions can be found for the remaining vectors $\mu_\nu(\tau)$ ($\nu = 2, 3, \dots, n$). The method is then applied to the problem of the elastic-viscous thread, q and $P(\tau, \epsilon)$ becoming two-dimensional vectors, and $A(\tau, \epsilon)$, $C(\tau, \epsilon)$ and $B(\tau, \epsilon)$ becoming matrices of the second order. [Abstractor's note: Throughout the treatment of the problem, numerous symbols are left undefined]. There are 3 Soviet-bloc references.

ASSOCIATION: Instytut mekhaniky AN URSR (Institute of Mechanics AS UkrSSR (Savin); Instytut matematyky AN URSR (Institute of Mathematics of the AS UkrSSR) (Feshchenko)

SUBMITTED: June 15, 1960

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28707

S/021/61/000/008/002/011
D210/D303

16.6800 (1253, 1327, 1024)

AUTHORS: Feshchenko, S.F., and Nikolenka, L.D.

TITLE: Calculations connected with asymptotic splitting of
a system of ordinary linear differential equations
on quick response computers

PERIODICAL: Akademiya nauk Ukrayins'koyi RSR. Dopovidi, no. 8,
1961, 990-993

TEXT: The discussion of a system of linear differential equations of high order is considerably simplified if one applies initially a transformation which splits the system into several independent systems of the lower order. If the coefficients of the given system

$$\frac{dx}{dt} = A(\tau) x(t), \quad 0 \leq t \leq \frac{h}{\varepsilon} \quad (1)$$

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- $x(t)$ being an n -dimensional vector, $A(\tau)$ a matrix of the order (n,n) - depend in a certain manner on t and on the parameter $\varepsilon > 0$, i.e. are functions of $\tau = \varepsilon t$, the splitting is performed with the aid of the well-known asymptotic method by S.F. Feshchenko (Ref. 1: Doct.diss. K, 1950) and Kh.L. Territin (Ref. 2: Matematika 1 : 2, 29 (1957)). The present paper proposes a method which makes it possible to split the system (1) on quick response computers. It is not necessary to know all the eigenvalues of the matrix $A(\tau)$ which is especially useful in the cases of nearly equal or multiple (at certain values of τ) roots of the characteristic equation. 1) Let the factor decomposition of the characteristic polynomial $D(\lambda)$ be known for any τ from the interval $0 \leq \tau \leq h$:

$$D(\lambda) = \prod_{i=1}^k D_i(\lambda) \quad (2)$$

where

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Calculations connected with ...

$$D_1(\lambda) = \lambda^{m_1} + \alpha_{1,1}\lambda^{m_1-1} + \dots + \alpha_{m_1-1,1}\lambda + \alpha_{m_1,1}, \sum_{i=1}^k m_i = n \quad (3)$$

It is supposed that the degree of each factor does not change in the whole interval $0 \leq \tau \leq h$, all factors are prime to each other, and each one of them may have nearly equal or multiple roots at some values of τ . The factors (3) can be obtained by determining all isolated eigenvalues of $A(\tau)$ and finding the factor which corresponds to the rest of the roots. It is known that in a manner corresponding to (2), the n -dimensional space R can be decomposed into a direct sum of k subspaces invariant with respect to $A(\tau)$; in the basis formed by linearly independent vectors of these subspaces, $A(\tau)$ has a quasi-diagonal form

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$$X^{-1}A(\tau)X = [A_1(\tau), A_2(\tau), \dots, A_k(\tau)] \quad (4)$$

X being the matrix of transformation to new coordinates, $A_i(\tau)$ ($i = 1, 2 \dots k$) - constituent matrices of the order m_i . This decomposition can be found with the aid of the operators of "parallel projection" $P_i(\tau)$ ($i = 1, 2 \dots k$) i.e. operators having the following properties:

$$P_i^2(\tau) = P_i(\tau), P_i(\tau)P_j(\tau) = 0 \ (i \neq j), \sum_{i=1}^k P_i(\tau) = E \quad (5)$$

E being the unit matrix. The operators $P_i(\tau)$ are determined for every τ . If one knows the operators $P_i(\tau)$ one can find the

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bases of corresponding subspaces. It is sufficient to use the fact that $P_1(\tau)$ makes equal to 0 any vector which does not belong to the subspace $P_1(\tau) R$, i.e. one can take as a basis of $P_1(\tau) R$ the orthonormalized solutions of the algebraical system

$$[E - P_1(\tau)]X_1 = 0 \quad (8)$$

2) According to the expansion Equation (2) one must look for the solution of Equation (1) having the form

$$x(t, \varepsilon) = \sum_{i=1}^k U_i(\tau, \varepsilon) \xi_i(t, \varepsilon) \quad (9)$$

$U_i(\tau, \varepsilon)$ being a matrix of the rank (n, m_i) and $\xi_i(t, \varepsilon)$ an n -dimensional vector satisfying

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$$\frac{d\xi_1}{dt} = A_1(\tau)\xi_1(t, \varepsilon), \quad i = 1, 2, \dots, k \quad (10)$$

$A_1(\tau)$ is a matrix of the rank (m_1, m_1) . The unknown matrices $U_1(\tau, \varepsilon)$ in the relation Eq. (9) are determined. The elements of the expansions

$$U_1(\tau, \varepsilon) = \sum_{s=0}^{\infty} \varepsilon^s U_1^{(s)}(\tau), \quad A_1(\tau, \varepsilon) = \sum_{s=0}^{\infty} \varepsilon^s A_1^{(s)}(\tau) \quad (12)$$

can be found from the system of algebraical equations

$$A(\tau) U_1^{(0)}(\tau) - U_1^{(0)}(\tau) A_1^{(0)}(\tau) = 0 \quad (13)$$

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and

$$A(\tau)U_1^{(s)}(\tau) - U_1^{(s)}(\tau)A_1^{(0)}(\tau) = F_s(\tau) \quad (14)$$

where

$$F_s(\tau) = U_1^{(0)}(\tau)A_1^{(s)}(\tau) + U_1^{(1)}(\tau)A_1^{(s-1)}(\tau) + \dots + U_1^{(s-1)}(\tau)A_1^{(1)}(\tau) + \frac{dU_1^{(s-1)}}{d\tau}$$

The matrix $U_1^{(0)}(\tau)$, as a basis of the m_1 -dimensional subspace that is invariant with respect to $A(\tau)$ can obviously be determined

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Calculations connected with ...

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D210/D303

according to (1). There are 5 Soviet-bloc references.

ASSOCIATION: Instytut matematyky AN URSR (Institute of Mathematics, AS UkrRSR)

PRESENTED: by Academician AS UkrSSR, Y.Z. Shtokalo

SUBMITTED: March 6, 1961

Card 8/8

27677
S/041/61/013/003/010/010
B112/B125

10.6500

AUTHORS: Feshchenko, S. F., Nikolenko, L. D.

TITLE: On the problem of splitting a system of ordinary linear differential equations for calculation purposes

PERIODICAL: Ukrainskiy matematicheskiy zhurnal, v. 13, no. 3, 1961, 109-113

TEXT: The authors split the system of equations $dx/dt = A(\tau)x$, $\tau = \varepsilon t$ (1) into two systems:

$$d\tilde{f}_1/dt = \Lambda(\tau, \varepsilon)\tilde{f}_1, \quad d\tilde{f}_2/dt = W(\tau, \varepsilon)\tilde{f}_2 \quad (5), (6)$$

which can be solved by means of rapid computers. Λ is a diagonal matrix. This splitting is made by two matrices $U_1(\tau, \varepsilon)$ and $U_2(\tau, \varepsilon)$:

$x = U_1\tilde{f}_1 + U_2\tilde{f}_2$. In order to determine U_1 and U_2 the authors solve the two equations: $\varepsilon dU_1/d\tau + U_1\Lambda = AU_1$, $\varepsilon dU_2/d\tau + U_2W = AU_2$ (7), (7')

in the following way: equation (7) is solved according to B. I. Rabinovich and I. M. Rapoport (O dvizhenii tverdogo tela s polostyami,

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S/041/61/013/003/010/010
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chaotichno zapolnennymi zhidkost'yu, 1960); equation (7') is solved by series expansion with respect to the small parameter ε :

$$U_2(\tau, \varepsilon) = \sum_{s=0}^{\infty} \varepsilon^s U_2^{(s)}(\tau) \quad (8), \quad W(\tau, \varepsilon) = \sum_{s=0}^{\infty} \varepsilon^s W^{(s)}(\tau) \quad (9). \quad U_2^{(s)} \text{ and } W^{(s)}$$

are determined from the equations:

$$AU_2^{(s)} - U_2^{(s)}W^{(s)} = F_s, \quad (11) \quad F_s = U_2^{(0)}W^{(s)} + U_2^{(1)}W^{(s-1)} + \dots + U_2^{(s-1)}W^{(1)}$$

+ $dU_2^{(s-1)}/d\tau$, ($s = 1, 2, \dots$), $F_0 = 0$. The following result is obtained:

$$U_2^{(s)} = d_1(A) \left[A^{m_2-1} F_s + A^{m_2-2} F_s W_1 + \dots + A F_s W_{m_2-2} + F_s W_{m_2-1} \right]. \quad \text{The matrices}$$

W are calculated according to the recurrence formulas $W_1 = W^{(0)} + a_1 E$,

$W_2 = W_1 W^{(0)} + a_2 E$, $W_{m_2-1} = W_{m_2-2} W^{(0)} + a_{m_2-1} E$. The numbers $a_1, a_2, \dots, a_{m_2-1}$

are the coefficients of a polynomial $D_2(\lambda) = D(\lambda)/D_1(\lambda)$. $D(\lambda)$ is the

characteristic polynomial of A ; D_1 is the factor of D which has only

isolated roots. The polynomial $d_1(\lambda)$ is defined by the representation:

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B112/B125

$1/D = d_1/D_1 + d_2/D_2$. The authors mention S. F. Feshchenko (Thesis 1950) and Yu. L. Daletskiy (DAN SSSR, t. XCII, No. 5, 1953). There are 4 Soviet and 1 non-Soviet references.

SUBMITTED: February 20, 1961, Kiev

Card 3/3

CN

An investigation of wire and rods to ascertain the cause of rejection of products.
P. F. FENECHKO. Nootskheniya Vsesoyuznogo Inst. Metal. 1931, Nos. 3-4, 447.- A
chem., metallographic and mech investigation was made of wire and rods used for
making nails and rivets in order to find the cause of their failure It is concluded that
an excessive amt. of P in the presence of As in the metal causes brittleness which is
responsible for the defective rivets and nails. S. I. MADORSKY

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

CO 9

Swedish steel bands for making horseshoe nails. K. M. Yur'ev and P. P. Pa-
 vlov. *Sovetskoe Vsesoyuznoye Inst. Metal.* 1931, Nos 3-4, 47-54. — Nadezhda.
 from Swedish steel bands were tested chemically, mechanically and metallographically.
 It was found that those samples which had a finer grain structure (i. e., free from liqua-
 tion) gave a higher mech. test. The fineness of structure is a result of proper thermal
 treatment of the steel
 S. L. Madonsky

ASME-SLA METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND PRIORS		PROCESS AND PROPERTIES INDEX	
CA		<p>Production of graphitic steel. P. F. Peschko, <i>Nat</i> [N.S.] 1, No. 7/8, 35 42(1941). - Graphitic steel to replace brass for raceways of roller bearings should be made with a min. content of free C, rolled or forged in a manner that prevents the sepn. of free C, formed into the raceways, and graphitized by heat-treatment. The most suitable steel contains C 1.50-1.65, Si 0.70-0.95; Mn 0.30-0.40, S not more than 0.025, P not more than 0.030, Cr not more than 0.08, and Ni not more than 0.20%. Heating the molten steel, avoiding Al as deoxidizer and refining the steel under a white slag all diminish free C in the ingot. Fe-Si is best added half at the beginning of refining and half 30 min. before the end of refining. Rolling the steel is preferable to forging; the higher the end temp. of rolling, and the larger the cementite lattice, the less free C there is in the steel. A free-C content of over 0.5% causes cracking, during forging; with less than 0.1% of C there are no difficulties from cracking. With the time of the first stage of graphitization the quantity of free C increases to a max., then decreases. Steel heated in its molten state is harder to graphitize. In steel hardest to graphitize, 50 hrs. of continuous heat-treatment causes 1.43% of C, i. e., 91% of total C in the steel, to sep. If less C is desired, the time can be shortened accordingly. M. Hosen</p>	
METALLURGICAL LITERATURE CLASSIFICATION		<p>1.50-1.65 C 0.70-0.95 Si 0.30-0.40 Mn 0.025 S 0.030 P 0.08 Cr 0.20 Ni</p>	

FESECHKO, P. F.

Improvement of Tool Heat-Treatment at the "Freser" Works. S. D. Bril, A. D. Frolovskiy and N. P. Fesechko, (Stanki i Instrumenty, 1952, (8), 20-22). [in Russian]. The extensive use of alkali hydroxide and salt baths in the heat-treatment of tool and high-speed steels at the Freser works is described. For the sub-critical temperature hardening of low-alloy steel final preheating is carried out in fused sodium chloride at 850-870° C., followed by quenching in a mixture of 75% potassium hydroxide with 25% sodium hydroxide at 180-210° C. All the heat-treatment operations have been made continuous, resulting in a nine-fold saving of time. High-speed tool steels are tempered in sodium or potassium nitrate at 550° C., giving increased productivity and avoiding the need for chemical or mechanical cleaning.—G. K.

1. FESECHKO, P. F.
2. USSR (600)
4. Chemistry, Technical
7. Chemistry in metallurgy, Khim. v shkole, No. 5, 1952.

9. Monthly List of Russian Accessions, Library of Congress, February 1953, Unclassified.

FESECHKO, P.F.

Testing the heat-resistance of alloys by the method of pure
bending. Issl.po zharopr.splav. 8:197-199 '62. (MIRA 16:6)

(Heat-resistant alloys--Testing)

PESENKO, Andrey

Our experimental... Sov. profsoiuzy 19 no.1:26-27 Ja '63.
(MIRA 16:1)

(Moscow--Labor and laboring classes--Dwellings)

S/659/62/008/000/025/028
1048/1248

AUTHOR: Pesechko, P.F.

TITLE: A pure-bend test for refractory alloys

SOURCE: Akademiya nauk SSSR. Institut metallurgii, Issledovaniya po zharoprochnym splavam. v.8. 1962. 197-199

TEXT: The test consists in the application of forces acting perpendicularly to the axis of the test specimen in a way that only normal stresses are generated. The apparatus can be used both in vacuo and under atmospheric pressure, at temperatures through 1400°C; resistance heating with either a.c. or d.c. is used. The specimens are rods 4 mm. in diameter and 130 mm. long. Results obtained with high-C steel, and iron-based refractory alloy, and 5 other (unidentified) refractory alloys are presented graphically, within the coordinates deflection-temperature. In all cases the deflection was insignificant (about 0.2 mm.) at low temperatures, but rised sharply at a certain temperature and reached 6.5-7.5 mm.; this temperature

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I048/I248

A pure-bend test for refractory...

was 450-550°C for the Fe-based alloys and above 1000°C for the other alloys. The method can be used to determine the yield strength of the test specimens, by charting the stress-strain diagrams at a given temperature for both the loaded condition and after the removal of the load. There is 1 figure. ✓

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FESENKO, A.I.

IVANOV, Yu.S.; FESENKO, A.I.

Increasing the efficiency of Wilson chambers operating in synchrotron
photon beams. Prib.i tekhn.eksp.no.3:36-38 N-11 '56. (MLRA 10:2)

1. Fizicheskiy institut im. P.N. Lebedeva AN SSSR.
(Cloud chamber)

USSR / Soil Science Tilling. Melioration. Erosion. J

Abs Jour : Ref Zhur - Biologiya, No 11, 1958, No. 48685

Author : Fosenko, A. I.; Sulima, A. G.
Inst : Ukrainian Scientific Research Institute of
Irrigated Agriculture

Title : The Fall Cultivation of the Soil

Orig Pub : Byul. nauchno-tekhn. inform. Ukr. n.-i. in-t
oroshayemogo zemled., 1957, No 3, 30-32

Abstract : An average increase by 2 centners/ha. in the
barley yield was obtained at the Genich Experi-
mental and Melioration Station after fall
harrowing of the soil plowed in autumn. The
repeated surface plowing is expedient only on
plots with weeds, and for the purpose of reduc-
ing the loss of soil moisture by evaporation. --
F. N. Sofiyeva

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FESSENKO, A.I.

AUTHOR
TITLE

PERIODICAL

ABSTRACT

CARD 1/3

GRIGOR'YEV, A.P., POPKOVA, E.I., FESSENKO, A.I.
An Anomalous Decay of Hyp-nucleus. 56-6-53/56
(Anomálny raspad gipernukleusa - Russian)
Zhurnal Eksperim. i Teoret. Fiziki 1957, Vol 32, Nr 6,
p 1589 (USSR)

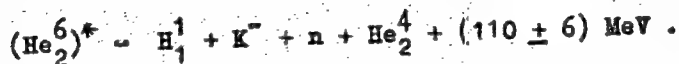
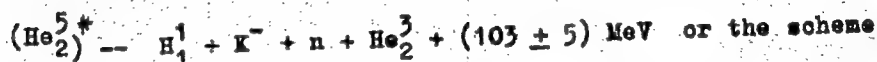
An uncommon decay of a hyperfragment was discovered in an emulsion chamber (emulsion HIKFI Type "p") which was irradiated by cosmic rays in the stratosphere. A star of the type $10 + 0n$ emits a hyperfragment which, after passing through a course of 2930 μ , disintegrates during flight into three charged particles. These particles come to a standstill already in the emulsion chamber. A micro-photograph is attached and the data on the products of decay are shown in a table. The masses of the products of decay were determined by means of the method density - range (with respect to the pions).

The charge and the remaining range of the hyperfragment in the emulsion were determined from the density of the δ electrons along the remaining range; they amounted to 2e and $600 \pm 100 \mu$, respectively. As the mass of one of the produced particles is equal to 850 ± 300 mass of electrons, it is naturally possible to presume that here

An Anomalous Decay of a Hypernucleus.

56-6-53/56

a K-meson is concerned, As, on the other hand, the charge of the hyperfragment determined with great accuracy, is equal to $2e$, the K-meson can be assumed to be negative. (Also the lack of decay products in the case of the K-meson tends to indicate a negative charge of the K-meson). The noncoplanarity of the products of decay of the hyperfragment tends to indicate the flying-off of at least one neutron; its energy is determined from the vector diagram of the momenta. Thus it may be assumed that the hyperfragment decays either according to the scheme



When determining the energy the mass of the K-meson was assumed to be equal to 966,7 electron masses. If it is assumed that the hyperfragment, as a result of the decay of a certain bound hyperon disintegrates, the mass of this hyperon is equal to 3000 electron masses. The estimation of the life of the hyperon gives the amount $5 \cdot 10^{-11}$ sec. The here discussed case is at present being studied more closely.

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An Anomalous Decay of a Hypernucleus.

56-6-53/56

ASSOCIATION: Moscow Engineering-Physical Institute.
(Moskovskiy inzhenerno-fizicheskij institut.- Russian)
PRESENTED BY: -
SUBMITTED: 26.3. 1957.
AVAILABLE: Library of Congress.

CARD 3/3

TOPORKOVA, E.P.; YEBENKO, A.I.; GRIGOR'YEV, A.P.

K-meson decay of hypernuclei. *Nek.vop.inzh.fiz.* no.3:28-31
'58. (MIRA 12:5)
(Nuclear reactions) (Mesons)

21(7)

SOV/56-35-5-43/56

AUTHORS: Ivanov, Yu. M., Fesenko, A. I.

TITLE: The Depolarization of μ^+ -Mesons in Nuclear Emulsions With Varying Content of Gelatin (Depolyarizatsiya μ^+ -mezonov v yadernykh emul'siyakh s razlichnym sodershaniyem zhelatiny)

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1958, Vol. 35, Nr 5, pp 1297-1298 (USSR)

ABSTRACT: The present paper aims at explaining the dependence of the spin depolarization of a positive myon on the relative share of the different components of the emulsion. For this purpose the asymmetry of the distribution of the electrons emitted in the $\mu^+ \rightarrow e^+$ decay acts (in a forward and rearward direction) is investigated. A chamber composed of layers of the usual NIKFI (type "R") emulsions was irradiated with a positive pion beam of the phasotron of the OIYaI (Joint Institute for Nuclear Research). During investigation of the emulsion, the $\pi^+ \rightarrow \mu^+ \rightarrow e^+$ -decays which developed entirely in an emulsion layer, were recorded. Results are given in a table. For the emulsions of all sorts investigated the ratio

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The Depolarization of μ^+ -Mesons in Nuclear Emulsions With Varying Content of Gelatin

$$A = \frac{2(N_{\text{backward}} - N_{\text{forward}})}{N_{\text{backward}} + N_{\text{forward}}} \text{ was calculated.}$$

Here N_{backward} , N_{forward} denote the number of electrons emitted in a backward and forward direction respectively. Also after taking all corrections and error sources into account the results obtained indicate a growth of angular asymmetry with an increase of the portion per weight of the gelatin in the nuclear emulsion. At present endeavors are being made to obtain more experimental data for the purpose of fully explaining the character of this dependence. Besides, 1198 cases

of $\pi^+ \rightarrow \mu^+ \rightarrow e^+$ -decays were dealt with, which were discovered in a fourfold diluted $(C_2H_4OH)_4N$ -containing emulsion. In this case the asymmetry coefficient is (0.182 ± 0.058) . The authors thank Professor I. I. Gurevich and V. G. Kirillov-Ugryumov for the interest they displayed in this work, and they also express their gratitude to Z. S. Galkina, G. I. Polosina and A. V. Smelyanskaya for their help in investigating the emulsion. There are 1 figure, 2 tables, and 5 references, 1 of which is Soviet.

Card 2/3

SOV/56-35-5-43/56

The Depolarization of μ^+ -Mesons in Nuclear Emulsions With Varying Content of Gelatin

ASSOCIATION: Moskovskiy inzhenerno-fizicheskiy Institut
(Moscow Engineering-Physics Institute)

SUBMITTED: July 9, 1958

Card 3/3

COUNTRY : USSR
 CATEGORY : CULTIVATED PLANTS. Grains. Leguminous Grains.
 : Tropical Cereals.
 : REF ZHUR - BIOLOGIYA, NO. 4, 1959, No. 15612
 AES. JOUR. :
 AUTHOR : Fesenko, A.I.
 INST. : All-Union Sci. Res. Inst. of Corn.
 TITLE : Strip Sowings of Corn.

ORIG. PUB. : Kukuruz, No. 4, 41-42

ABSTRACT

: At the Genicheskaya experimental station (Khersonskaya Oblast), the All-Union Scientific Research Institute of Corn conducted in 1956 and 1957 experiments with strip sowings of corn, the hybrid Dneprovskiy 2. The sowing was done by the square-nest method with 70 x 70 cm inter-rows and with the rotation after six corn rows of 4.2 m fallow strips (by this method one half as many plants are grown per hectare as by the usual square-nest method). The crop yield from the strip sowings proved higher than usual.

CARD:

-- Ye.I. Saks

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88418

S/056/60/039/006/002/063
B006/B056

21.5200
AUTHORS:

Ivanov, Yu. M., Fesenko, A. I.

TITLE:

Investigation of the Depolarization of μ^+ -Mesons in Nuclear Emulsions

PERIODICAL:

Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1960,
Vol. 39, No. 6 (12), pp. 1492 - 1496

TEXT: The authors wanted to determine the effect of the relative AgBr-content of a nuclear emulsion upon the asymmetry coefficients for the μ^+ - e^+ decay. An emulsion chamber consisting of free НИКФИ-Р (NIKFI-R) emulsion layers of four different kinds (with different AgBr-content) was exposed to a positive 350-Mev pion beam. The chamber was surrounded by a double iron shield, which attenuated the strength of the scattered field of the accelerator and the terrestrial field to 0.04 oersted. The flux was $5 \cdot 10^4 / \text{cm}^2$. Work was carried out with ordinary, 2-, 3- and 4-fold diluted НИКФИ gelatin emulsion. Concerning the emulsions used, the data of the НИКФИ (Scientific Cinematic and Photographic Research Institute), and of the FIAN

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Investigation of the Depolarization of
 μ^+ -Mesons in Nuclear Emulsions

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(Institute of Physics of the AS) are compared with the authors' own data. On the irradiated plates, a total of 45457 μ^+ - μ^+ - e^+ decay events was recorded, and after evaluation (selection of events with μ^+ -path lengths $> 50\mu$ in the emulsion), 38.192 still remained. The numerical results are given in Table 2. After carrying out the corrections, which are discussed in detail, the asymmetry coefficients for the four degrees of dilution of the emulsions were obtained: $\alpha_{2x1} = 0.100 \pm 0.018$, $\alpha_{2x2} = 0.133 \pm 0.022$

$$\alpha_{2x3} = 0.153 \pm 0.020 \quad \alpha_{2x4} = 0.170 \pm 0.022.$$

From the data obtained it is possible, by using the formula $P = 3\alpha$, to determine the residual polarization of μ^+ -mesons in AgBr and gelatin separately. For this purpose formula $P = P_1\gamma + P_2(1-\gamma)$ is used, where P_1 and P_2 are the μ^+ -polarization in the decay into gelatin and AgBr, respectively, AgBr, $\gamma = xS/(1+xS)$ is the relative number of μ^+ stopping points in gelatin, x is the volume ratio of gelatin to AgBr, S is the moderating property of the gelatin referred to that of AgBr. S was between 0.34 and unity, and thus one obtained for P_2 a value of between 0.09 and

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0.12 and for P_1 of 0.9 - 0.7. An examination of the results obtained by other authors makes a value of $S = 0.8$ appear to be probable. Thus, $P_1 = 0.72 \pm 0.22$ and $P_2 = 0 \pm 0.11$. The strong μ^+ -depolarization in AgBr is discussed from the viewpoint that the latter, apart from multiple electron exchange, is interrelated with the formation of mesonium. The authors finally thank Professor I. I. Gurevich for his advice and interest, Professor V. I. Gol'danskiy and B. A. Nikol'skiy for discussions, and Z. S. Galkin, G. I. Polosin, and A. V. Smelyanskaya for their help in evaluating the emulsions. There are 1 figure, 2 tables, and 20 references: 7 Soviet, 2 Italian, and 10 US.

ASSOCIATION: Moskovskiy inzhenerno-fizicheskiy Institut (Moscow Institute of Physics and Engineering)

SUBMITTED: April 23, 1960 (initially) and July 28, 1960 (after revision)

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Таблица 2

1	2	3	4	5	6
№	Полное число случаев	№	Полное число случаев	№	Процент наблю- даемых показ- ателей
1	14,184	5,581	6,081	0,089	0,34
2	9,902	3,831	4,420	0,117	0,59
3	11,547	4,514	5,102	0,122	1,73
4	9,824	3,697	4,299	0,151	3,9

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Text to Table 2: 1) Dilution, n-fold. 2) Total number of events.
3) N_{forward} . 4) N_{backward} . 5) Unobserved positrons, %.

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FESENKO, A.S.; SAVUSHKINA, A.N., inzh., rukovoditel' raboty

Fire prevention measures in the production of formaldehyde.
Pozh. bezop. no.4:73-80 '65. (MIRA 19:1)

FESENKO, B.I.

Conference-seminar of the working group on kinematics and
dynamics of stellar systems. Astron. zhur. 39 no. 4: 772-773 J1-Ag
'62. (MIRA 15:7)

(Stars)

FESENKO, B.I.

Method for detecting binary stars. Uch.zap.LGU no.307:202-209
'62. (MIRA 15:9)
(Stars, Double)

PESENKO, B. I.

A method for determining the excentricity distribution of the
orbits of visual binary star. Vest. LGU 18 no.1:151-155 '63.
(MIRA 16:1)

(Stars, Double—Orbits)

ACCESSION NR: AP4040726

S/0043/64/000/00170144/0148

AUTHOR: Fesenko, B. I.

TITLE: A statistical method for detecting multiple star systems

SOURCE: Leningrad. Universitet. Vestnik. Seriya matematiki, mekhaniki i astronomii, no. 7, 1964, 144-148

TOPIC TAGS: star count, multiple star, binary star, stellar multiplicity

ABSTRACT: The paper considers a statistical method for determining the average multiplicity of systems in a stellar field having a certain brightness. The method, based on the scattering of stellar frequencies, is a modification of a previous method suggested by the author (B. I. Fesenko. Uchunyye zapiski LGU, No. 307, p. 202, 1962) for the detection of binary stars. The method considers only systems in which the components are individually visible on the photograph and excludes a large number of binary systems in which one of the components is brighter and one is weaker than the limiting value. In the present paper, the method is applied to the star count data found on three charts of the Mt. Palomar atlas and in the Parisian zone of the Carte-du-Ciel + 24°. The average multiplicity was found to be 1.59 ± 0.14 and 1.018 ± 0.021 , respectively. Orig. art. has: 2 tables and 17 formulas.

Card

ACCESSION NR: AP4040726

ASSOCIATION: none

SUBMITTED: 20Sep62

SUB CODE: AA

NO REF SOV: 001

ENCL: 00

OTHER: 001

Card

2/2

FESENKO, B.I.

Statistical investigation of double and multiple stars.

Uch. Zap. LGU no.323:146-168 '64.

(MIRA 17:12)

AGEKYAN, T.A.; PETROVSKAYA, I.V.; FESENKO, B.I.

Rotation of the galaxy from radio observation data. Astron.
zhur. 41 no.6:1027-1037 N-D '64 (MIRA 18:1)

1. Astronomicheskaya observatoriya Leningradskogo gosudar-
stvennogo universiteta.

FESENKO, B.I.

Method for studying the eccentricities of long-period double stars.
Vest. LGU 20 no.1:121-133 '65. (MIRA 18:2)

FESSENKO, B.I.

Color excess fluctuations in stellar clusters. Uch,zap.LGU
no.328:146-149 '65.

(MIRA 18:10)

8/058/63/000/003/069/104
A059/A101

AUTHORS: Prokopalo, O. I., Fesenko, B. T.

TITLE: Modification of the dielectric properties of polycrystalline barium titanate on the substitution of titanium ions in it by hafnium or thorium ions

PERIODICAL: Referativnyy zhurnal, Fizika, no. 3, 1963, 61, abstract 3B437
(In collection: "Segnetoelektriki". Rostov-na-Donu, Rostovsk. un-t, 1961, 123 - 127)

TEXT: An attempt was made to obtain solid solutions of $Ba(Ti,Hf)O_3$ and $Ba(Ti,Th)O_3$ analogous to the solid solutions of $Ba(Ti,Zr)O_3$ by way of sintering $BaTiO_3$ at 1,380 and 1,425°C with the oxides HfO_2 and ThO_2 to which $BaTiO_3$ is added for maintaining the stoichiometric ratio. Solid solutions of $Ba(Ti,Zr)O_3$ were prepared in an analogous way for comparison; their dielectric properties were found to be similar to the properties of analogous compounds obtained when $BaZrO_3$ was used as the initial product. An increase in the sintering temperature promotes a more uniform distribution of ions over the bulk of the sample which results in the possibility to obtain materials on the $BaTiO_3$ -basis in which, in-
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Modification of the dielectric properties of...

S/058/63/000/003/069/104
A059/1101

stead of Ti ions, up to 5 molar % of Hf ions and up to 6 molar % of Th ions have been introduced. The measurement of the dielectric constant ϵ in weak fields at a frequency of 2 Mc showed that the increase in the Hf content leads to a shift of the ϵ value towards the region of lower temperatures, with an introduction of up to 1 molar % of Hf causing an increase in ϵ . In the case of BaTiO_3 samples containing ThO_2 , a second maximum is observed on the curves $\epsilon = f(T)$ at 70 - 80°C.

S. Solov'yev

[Abstracter's note: Complete translation]

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